UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,564	07/14/2004	Shinkichi Ikeda	MAT-8574US	2485

23122	7590	09/13/2005

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EXAMINER
LAM, DUNG LE

ART UNIT	PAPER NUMBER
2687	

DATE MAILED: 09/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/501,564	IKEDA ET AL.
	Examiner	Art Unit	
	Dung Lam	2687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _25 July 2003_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-35_ is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-35_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _14 July 2005_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☒ All   b)☐ Some * c)☐ None of:

　　　　1.☒ Certified copies of the priority documents have been received.

　　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Priority

1.   Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)–(d), which

papers have been placed of record in the file.

Information Disclosure Statement

2.   The references listed in the Information Disclosure Statement submitted on July

14, 2003 have been considered by the examiner (see attached PTO-1449 form).

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out

and distinctly claiming the subject matter which the applicant regards as his

invention.

Claims 1-19, 20-35 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention. Furthermore, the claims are generally

narrative and indefinite, failing to conform with current U.S. practice. They appear to be

a literal translation into English from a foreign document and are replete with

grammatical and idiomatic errors. Appropriate corrections is required.

4.   The examiner suggests writing each step actively, to conform to U.S. practice,

such as:

> Determining a home agent for a mobile terminal ...
> Registering a main home address ...

5.   Claims 1-19 were written in narrative form and it is unclear as to which element is

performing which functionality. For example, claim 1, the language was so confusing

that one of ordinary skill in the art has to guess which element is configuring a domain

network and which component is moving between the subnets.

6.   The phrase "move-in network" used through out the claims is hard to understand,

it is suggested to change to "moved-in foreign network" to clarify the meaning of the

claims.

7.   Claim 5-7, it is not clear who's "changing over" and what "as required" means.

For examination purpose, the examiner interprets the claim as "a step of changing to a

new main home agent, when necessary.

8.   Claims 5-7, it isn't clear what "effective" or "non-effective" means.

9.   Claim 20 is also not clear in stating which component is doing what.

10.   Claims 29 - 34 cite "to any of claims" which is believed to be a mistake, it should

be changed to -- to claim --. There's also an incomplete and unclear phrase, "started is

a notification of a sub-home address".

11.   The above outlines are a few examples among many unclear words in the

claims. Also the confusing claims seem to be repeated verbatim at the beginning of the

Disclosure of the invention section. Please make the appropriate corrections to clarify

the claimed invention.

Claim Rejections - 35 USC § 103

12.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as
> set forth in section 102 of this title, if the differences between the subject matter sought to be
> patented and the prior art are such that the subject matter as a whole would have been obvious
> at the time the invention was made to a person having ordinary skill in the art to which said
> subject matter pertains. Patentability shall not be negatived by the manner in which the invention
> was made.

13.   Claim **1, 3, 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Iyer et al. (US Pub. No. 2004/0203749).

14.   Regarding *claim 1*, **Iyer** teaches a method of managing mobility comprising:

determining a home agent (Home agent selection 108a, para. 21 and Fig. 2) of a

mobile terminal which inherently communicates with an access point apparatus

arranged on a subnet and said mobile moving between the subnets and the foreign

domain networks (10 para. 1 and Fig. 1) to carry out mobility management of the mobile

terminal;

registering a mobile terminal's main home address, which is assigned by the

main home agent (home agent), to a server (mobile proxy device 16, para. 1 and Fig. 1)

for managing an address of an apparatus to have a connection to the domain network

(para. 28 and 29);

and registering a sub-home address as a care of address for the main home

agent to use when the mobile terminal moves to a foreign network (Col. 2, para. 17).

15.   Regarding **claim 3**, Iyer teaches a method of managing mobility according to

claim 1. Iyer further teaches a step for the mobile terminal to select a home agent as a

candidate for the main home agent apparatus from the domain network (para. 30).

16.   Regarding claim 20, Iyer teaches a mobile terminal comprising:

a main home agent selecting section (108a, Col. 2 para. 21) for selecting a main

home agent apparatus in location management and for making a registration request of

a home address from a server (mobile proxy device 16, para. 1 and Fig. 1), wherein the

home address is assigned by the main home agent; a mobile IP processing section

(Mobile IP signaling portion 108b, para. 20) for notifying a sub-home agent a care of

address for use as a home address in a foreign network when it moves to a domain

network different in service form using mobile IP protocol (para. 17); and an inherent

home agent registering section for notifying the main home agent of the main home

address and a sub-home address for use in the foreign network (para. 26).

17.   Claims 2, 4, 5-19, 21-28 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Iyer et al. (US Pub. No. 2004/0203749) in view of Wenzel et al. (US

Publication No. 2003/0073439).

18.   **Iyer** teaches all the limitations of claims **claim 2 and 21 except** for a candidate

list stored in the mobile. In an analogous art, **Wenzel** teaches a step wherein in a home

agent previously stored in a mobile terminal, is selected as a candidate for the main

home agent (para. 44 and Fig. 6). Therefore, it would have been obvious to a person of

ordinary skill in the art at the time of the invention was made to combine Iyer's method

of registering a home agent and Wenzel's teaching of selecting the candidate home

agents from a list stored locally in the mobile because this combination would not only

speed up but also simplify the home agent selection process since it eliminates the

need in querying for candidate agents over the network (Col. 2 and 3, para. 0030).

19.   **Iyer in view of Wenzel** teach all the limitations of **claim 4 and 22**. Wenzel

further teaches a step for the mobile terminal to acquire the information about a home

agent apparatus to become a candidate for the main home agent apparatus from the

domain network (Col. 4, para. 0044).

20.   Regarding **claims 23-24**, they are apparatus claims corresponding to claims 2

and 4 respectively. Therefore, they are rejected for the same reasons as claims 2 and 4

respectively.

21.   **Iyer in view of Wenzel** teach all the limitations of **claims 5-7**, wherein Wenzel

teaches in the home agent determining step, when the current home agent fails

(primary Home Agent fails, 7 Col. 3, par. 0030), the mobile terminal selects a new main

home agent from the list of other home agents. Therefore, it would have been obvious

for one of ordinary skill in the art at the time of the invention was made to select a new

home agent and ensure redundancy capability and enable a smooth continuation of

service in the network even when the main agent has failed.

22.   **Iyer in view of Wenzel** teach all the limitations of **claims 8-10**, wherein, in the home agent determining step, the mobile terminal determines the main home agent apparatus from the information about a home agent apparatus, on the basis of a preference as one of the information (ranking ordering, Col. 3, para. 36).

23.   Iyer in view of Wenzel teach all the limitations of claims 11-13, wherein in the home agent determining step, the mobile terminal determines the main home agent apparatus from the information about a home agent apparatus. However, they fail to explicitly teach that the selection of the main home agent is on the basis of an access frequency to the home agent apparatus.   Nonetheless, Wenzel teaches a mechanism of distributing the load among secondary home agents (col. 3, para. 35), which implies that the frequency of assigning work among the home agents should be distributed equally to prevent over-working of one particular home agent and thus decrease the chance of a network failure. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention was made to select a new main agent on frequency access to prevent over-loading of the network.

24.   Iyer in view of Wenzel teach all the limitations of claims 25-26, wherein, the main home agent selecting section selects the main home agent apparatus from the home agent list stored in the home domain storing section, on the basis of a priority as one of information about a home agent apparatus (ranking ordering, Col. 3, para. 36).

25.   Regarding **claims 27 and 28**, they are the corresponding method claims to the apparatus claims 9-10. They are rejected for the same reasons as 9-10.

26.   Claims **14-19 and 29-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Iyer et al.** (US Pub. No. 2004/0203749) in view of **Wenzel** et al. (US Publication No. 2003/0073439) in further view of **Heller** (US Pub. No. 2002/0147837).

27.   **Iyer in view of Wenzel** teach all the limitations of **claims 14-19** except for the registration that goes through a link layer. In an analogous art, Heller teaches a registration request step of making a request for a registration to the home agent in a domain network to be connected through a link layer of the mobile and acquired an IP address, of link layers possessed by the mobile terminal which turns into an active state, wherein, the sub-home address registering step is carried out when the registration request is granted by the home agent apparatus (para. 018). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to make use of the link layer as an standard means of communicating data in IP mobilility management.

28.   Iyer in view of Wenzel teach all the limitations of claims **29-34** except for the registration that goes through a link layer. In an analogous art, Heller teaches the home agent registering section that makes a request to register to a sub-home agent apparatus through a link layer which inherently turns the sub-home agent from an inactive state to an active state, wherein a notification of a sub-home address is sent to the main home agent apparatus upon receiving a grant for the registration request by the sub-home agent apparatus (para. 018).

29.   Claim **35** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Iyer et al.** (US Pub. No. 2004/0203749) in view of **Wenzel** et al. (US Publication No. 2003/0073439) in further view of **Heller** (US Pub. No. 2002/0147837) and further in view of **Flykt** (WO 01/41395).

30.   Iyer in view of Wenzel teach all the limitations of claims **35** but fails to teach that when receiving a multi-encapsulated packet, a source address described in an innermost header is taken as a destination of registering location.   In an analogous art, **Flykt** teaches a multiple-encapsulated data packet (col. 6, lines 10-25). He further teaches that IP encapsulation is known to be used by Mobile IPV4/IPV6 standard provided by IETF (col. 3, lines 21-25). Therefore it would have been obvious for one of ordinary skill in the art to combine Iyer and Wenzel's teaching of the home agent registration to also include the known in the art IP encapsulation concept to facilitate the mobile IP management.

Citation of Prior Art

31.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

> **Yuan** (US Patent No. 6496704) discloses a method of allowing internet data transfers to mobile data devices via link layers.
>
> **Leung** (US Pub. No. 2003/0224788) teaches the registration process between a mobile node with a home agent.

Leung (US Pub. No. 6195705) teaches the method of automatic back up of a

Home Agent in Mobile IP.

Khalil (EP Patent Application 1058421) teaches a method of discovering a

dynamic home agent.

Conclusion

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Dung Lam whose telephone number is (571) 272-6497.
The examiner can normally be reached on M - F 8-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number
for the organization where this application or proceeding is assigned is (571) 273-6497.

Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR.
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8/22/05

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PATENT EXAMINER